NOTES IN THE PROVINCES.

The ruins of St. Mary Magdalene, Doncaster, appear to be still, or only now, in course of excavation. Several articles of minor importance—such as a chalice, a seal, and some coins—have been found, and also several human skeletons in good preservation, on the site of the ancient chancel.——The new Presbyterian church at Dudley was opened on the 24th ult. It will accommodate 600, with a small gallery for 150 children, connected with schools below for 300. The building has a tower and spire 100 feet in height. The roof is of stained carpentry. The cost was about 1,900*l.*; Mr. Hay, of Liverpool, was the architect.——Horfield Church, now enlarged, was to be consecrated on Wednesday last; and St. Simon's Church, Baptist Mills, on Tuesday, by the Bishop of Gloucester and Bristol.——A new east window, filled with stained glass, is about to be put up in Trowbridge Church, 'to commemorate the recent day of public thanksgiving.' In the aisle, too, a memorial window, also of stained glass, is about to be erected.——The means of restoring the chancel of Newchurch, Ryde, are accumulating, and, it is hoped, will eventually lead to the restoration of the whole church.——It is always a pleasing duty to record the tasteful or generous endeavours of the clergy to restore and decorate the sacred edifices with which they are more immediately connected. Such is the case at Lyddington, where the incumbent, the Rev. Mr. May, has contributed largely to the thorough repair and restoration of the parish church, the south wall and porch of which have been entirely rebuilt, two decorated windows restored, and an east window placed in the chancel, designed from a decorated one in Herne Church, Kent. The cost of this work will be about 900*l.* Such, too, according to the *Chelmsford Chronicle*, is the case at Little Canfield, the rector of which, the Rev. Charles Lesingham Smith, has of late caused a variety of restorations and renovations to be executed in and about the parish church, under the superintendence of Mr. Wm. Ollett, Jun. The south wall of the chancel, and two windows in it, have been restored, a new studded oak door added, an early Norman font recut and worked, the chancel-floor paved in diamond-work, encaustic tiling laid round the altar, an early Gothic piscina in the chancel-wall restored, and other works done or to be done, including the restoration of the large east window.——A carved oak pulpit, of octagonal form, has been executed for St. Neot's Church, from drawings by Messrs. Wing and Jackson, of Bedford, and executed by Mr. James Rattee, of Cambridge, at a cost of 130*l.*

SANITARY PROGRESS IN THE PROVINCES.

The Health Committee at Liverpool are adopting probably the best and most effectual way to disperse foul airs from the abodes of the celebrated devotees of fair breezes, by 'raising the wind,' under a pressure of five pounds to the hundred, in sterling 'columns' of 'not less than five hundred,'—raised, of course, or to be raised, through the powerful columns of the press, and secured by an impost, based upon a sufficiently strong foundation, well able to bear it, and nailed down to it by tax.——We know not well how to account for the fact that the principal preparations against the plague which is moving so steadily from the east and south, appear to be in the north and west. Is there any truth after all in the new-fangled doctrine of electro-magnetic antagonism and progress,—certainly in that precise direction, namely, north-westward from the more south-easterly latitudes and longitudes? At all events it happens now, as on a previous occasion, that our chief materials come from the north and west, south-eastward, to their metropolitan destination,—as from Hull, for instance, where the sanitary ferment is purging the abodes of the living from the corruption of the dead; from Leeds, where it is working out 'a new sewerage bill;' from Newcastle and Gateshead, where it is still more active in the institution of associations, and in the expulsion of thousands of cart loads of putrid matter; and from the more or less near neighbourhood of Newcastle and Carlisle,—from Winlaton, Workington, Appleby, where eyes are being opened and nostrils closed, and 'putrid heaps of dung, stagnant pools, open and offensive conduits' or other 'accumulations of filth,' are being doomed to eternal abolition. Seriously, we have much greater activity and energy northwards and westwards to record than elsewhere; but it may be that 'elsewhere' the energy is past and in its wane: we hope not, now that it ought to be waxing every where and waning no where.——Lord Morpeth has given notice that, on the 10th of February, he will bring in a bill to provide for the public health.

ARRANGEMENT OF PRISONS.

PREVENTION OF SOUND.

At a meeting of the Franklin Institute, United States, in September last, an account was given of some experiments made at the newly-erected Berks County Prison, U. S., with regard to the prevention of communication between the prisoners by means of transmitted sound. The reader referred to the importance of such prevention in establishments intended to carry out the principle of separate confinement, as well as in asylums for the insane, and other public institutions. In the Eastern Penitentiary of Pennsylvania, where the ventilating flues afforded a medium of communication, an attempt was made to prevent it by the insertion of iron plates, which, however, were found to be objectionable on account of their obstructing the ventilation. The Berks County Prison, at Reading, is said to be well designed and constructed, and has cost, in its erection, about 55,000 dol. Particular care has been taken to secure a proper ventilation and warming throughout the building. This is attained by means of a tall chimney-shaft, with which all the ventilating flues are connected; warm air being communicated to each apartment near the ceiling, and the foul air carried off by an opening into the ventilating flue near the floor. In order to prevent communication between the prisoners, by means of sound transmitted through these flues, two enlargements are made in them about ten feet apart, in each of which is inserted an earthen vessel having the form of a paraboloid. The sound, falling upon these paraboloids, is reflected in such manner as to destroy its effect. In order to test practically the effect of this improvement, the committee distributed themselves in different cells, and found that, by the utmost exertion of voice, they were unable to make themselves heard from one cell to another. A curious proof of this was afforded by the fact, that after some of them had shouted until they were hoarse, they were visited by others who came from a neighbouring cell to inquire why they had not commenced the experiment of calling to them through the flue.

Referring to other contrivances for this purpose the reader said that slates, placed in a triangular form in the flues, had been tried in the Pentonville Prison in England; but he doubts whether this would be found so effectual as the paraboloid. With regard to the expense of this arrangement in the Berks County Prison, he said that the cost of the paraboloid, which is made of common pottery, being but twenty cents, is more than compensated by the saving of masonry consequent upon the enlarged spaces left in the flues for their reception.

ARCHITECTURE AND IMPROVEMENTS IN AMERICA.

A new opera-house in New York is exciting attention. Mr. N. P. Willis, who christens it the "excelsior opera," thus notices it in *The Home Journal*:—"An egg halved lengthwise, with the plane downwards, would represent the shape of the new house above the level of the foot-lights on the stage. If the yolk were left whole (bellying under), it would give the space occupied by the orchestra and the parterre. The stage is in the small end of the egg, and the ceiling, outwards from this, is fashioned in the shell curves, which serve both the purposes of beauty and acoustics. The fronts of the different galleries are of iron open-work (in the style and shape of a trellised balcony) and give the *ensemble* a very light and elegant appearance. The pit is long, and of a very gentle ascent from the orchestra. Immediately at its back runs round an open platform, on which stand two rows of arm-chairs. Behind these there is an open alley; and, above the alley, at very good talking height for a tall man (but at a tip-toe elevation for a short one), extends the first row of boxes. The effect of these, from their running so far back under the second gallery, is rather that of holes in the wall, and the occupants look shelved and tucked away, but they are the best boxes for convenience of seeing and not being seen. There are three or four private boxes on each side of the second gallery,—which, private though they may be called, seemed to us the least private seats in the house; and the boxes which extend from these toward the centre appeared to be very advantageous for seeing and hearing."

To facilitate traffic in New York, a suggestion has been made to have rails laid down along the whole extent of Broadway, and to have large cars, capable of holding fifty or a hundred persons, running upon them, say every five minutes. The rail might be owned or formed by the present omnibus proprietors, who could bring their passengers, as usual, up to Broadway, and then furnish them with tickets, to continue their journey.

The first stone of a reservoir for the Water-Works Company, which covers an area of 40,000 square feet, has been laid at Boston. From the speech of the mayor on the occasion we learn that,—It is to be brought in an oval brick aqueduct over six feet in height, about fifteen miles from Cochituate Lake to Brookline, where it discharges itself into a reservoir of more than twenty acres in extent.

From Brookline the water is forced by its own pressure through pipes of 30 and 36 inches in diameter, to the two reservoirs in the city, the one on Mount Washington, at South Boston, which will contain superficies of 70,000 and the one on Beacon Hill of 38,000 feet. The latter is to be raised on arches 60 feet, is to support a pond of the depth of 15 feet, and will contain, when full, three millions of gallons. The length of the brick aqueduct is a little more than fourteen miles,—of this nearly seven are finished and ready for the water, and the grading and bricks for the rest are in such a state of forwardness as to render its completion certain early in the summer. The line of pipes between Boston and Brookline and in the city, will amount to a little over 60 miles in length. The work is one-half completed. The Lake Cochituate has been bought, great part of the land damages have been paid, and the expenditure has already been 1,500,000 dollars.

Miscellanea.

Expense of Using Hard Water.—Mr. Wrightson, after pointing out the extreme hardness of the waters used in Birmingham, has been shewing the good people of that important town how much this costs them. He says:—"Taking twelve of Professor Clark's degrees of hardness to be the average of the entire quantity of water consumed in Birmingham, and taking 100,000 gallons as the average daily consumption in washing the person alone—which must certainly be below the mark, not being four pints for each person (I believe the population is over 200,000)—as 100,000 gallons at sixteen degrees would require 32,000 gallons, 24,000 gallons of soap solution (or its equivalent in soap) would be required for the same quantity at twelve degrees, in order to remove the lime it contains before the detergent property of the soap can have any effect. Now, this soap solution contains as near as possible about 1¼ oz. of soap in each gallon, therefore 24,000 gallons = 27,000 oz., or 1,687 lbs. This for one day's waste is 615,755 lbs. for the year, which, at 4d. per pound, is 10,262*l.*, no trifling sum to be wasted among the inhabitants of a town in washing the person alone. The further waste in washing linen, &c., must of course be proportionately great, to say nothing of the extra wear and tear, for it is well known how destructive hard water is to linen, notwithstanding the copious use of soap and soda. These facts sufficiently shew how important it is for a manufacturing town like Birmingham to be abundantly supplied with *water the softest it is possible to obtain.*

Farringdon Street.—Mr. Wakley—and no wonder—has presented a petition in the Commons, complaining of the delay in completing the new street to continue Farringdon-street to Clerkenwell.

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